

### REMARKS

Favorable reconsideration of this application is requested in view of the following remarks.

The Examiner contends that in the IDS filed on 04/29/2005 there is listed US document 2003/27072, it is assumed this is US PGPub 2003/0027072 and Japanese patent 10-198070 does not have an English translation, and the relevance is not listed anywhere, therefore it has not been considered. Applicants respectfully request the Examiner's consideration of the references.

The listed US document 2003/27072 is in fact, US 2003/0027072. Applicants submit that the omission of the preceding 0's is trivial and easily understood. The Japanese patent 10-198070 corresponds to US 5998078, which has been filed with the supplemental IDS of July 31, 2006 and indicated as 5998078.

The Examiner contends that Japanese patents 2619439, 2744790, 9-281748, 2801507, 2000-214638, and 2002-23429 do not have an English translations, and the relevance is not listed anywhere, therefore they have not been considered. Applicants respectfully request the Examiner's consideration of the references.

Translations of abstracts of Japanese documents 2619439 and 2744790 have been filed with the IDS of April 29, 2005. Copies are filed again herewith for the Examiner's convenience. In addition, the Japanese documents 9-281748 and 2801507 and the Japanese publications 2000-214638 and 2002-23429 correspond to US 5702859, US 5567561, US 6106986, and US 2002/0064724, respectively, which have been filed with the IDS of April 29, 2005.

The Examiner contends that Canadian patents 1166626 and 1094168, European patent application 0606074, and Japanese patents 1147478 and 1284862 have been filed with the instant application, but are not on any filed IDS, therefore they have not been considered. Applicants respectfully request the Examiner's consideration of the references.

CN shows Chinese patents in the supplement IDS, and Chinese Patent 1166626 corresponds to US 5766814, and Chinese patent 1094168 corresponds to CN 1086232 and European patent 0606074. The above mentioned patents have been filed with the supplemental IDS of February 26, 2007. In addition, the abstracts of Japanese publications 1147478 and 1284862 correspond to Japanese patents 2619439 and 2744790, respectively. The abstracts of these Japanese patents have been filed with the IDS on April 29, 2005.

The Examiner contends that Japanese patent 99111474 and application 200380102687 have been filed with the instant application, but are not on any filed IDS and do not have an English translation, therefore they have not been considered. Applicants respectfully request the Examiner's consideration of the references except for the application 200380102687.

No. 99111474 is a Chinese application 99111474 and corresponds to CN 1246659 and US 6326116, US 6270937, and US 6432599. These patents have been filed with the supplemental IDS of February 26, 2007. The document numbered as 200380102687 is from a corresponding foreign application and has been filed for the Examiner's reference.

The Examiner advised that two documents, one of which appears to be a US PGPub and one which appears to be a US patent, have been filed with the instant application, but do not contain any document identifiers, and therefore have not been considered. Applicants are not able to determine what documents are being referenced here. The Examiner is invited to contact the undersigned and/or provide copies of the documents so that Applicants can provide the requested information.

The Specification has been revised editorially as requested.

Non-elected claims 19, 20, and 21 have been cancelled without prejudice.

Claims 1, 6, 11, 12, and 14-18 have been rejected under 35 U.S.C. 103 (a) as being unpatentable over Yuasa et al. (US Patent No. 6579653) in view of Nakamura et al. (US PBPub No. 2002/0064724). Applicants respectfully traverse this rejection.

Firstly, Yuasa discloses a carrier coated with a curing type silicone resin but merely lists resins to be used for coating of the carrier (see coln. 40, line 61-coln. 41, line 6) and a coupling agent for treatment of the surface of magnetic fine powder (see coln. 26, lines 26-30). The reference, however, does not disclose use of such a carrier coated with a fluorine-modified silicone resin containing a particular additive such as an aminosilane coupling agent required in claim 1 of the present invention. In the present invention, the aminosilane coupling agent to be used for a carrier is essential because an aminosilane coupling agent ensures a sharp charge quantity distribution in a positively-chargeable fluorine-modified silicone resin while allowing negative chargeability to be imparted and as a result, the agent enables a fast charge rise in supplementally added toner and reduces the amount of toner consumption (see page 12, lines 7-12). Specially, when the aminosilane coupling agent is used with fluorine modified silicone resin, due to a crosslinking property of the aminosilane coupling agent, the agent increases the coating resin hardness, reduces wear, separation, improves resistance to toner-spent, stabilizes charging, and increases durability (see page 12, lines 12-17; page 83, lines 6-15).

Yuasa discloses use of an aminosilane coupling agent for surface treatment of magnetic fine powder, which is to be incorporated into a toner (coln. 26, lines 26-30). The reference further discloses a dry treatment method, in which a gaseous silane coupling agent reacts with a magnetic material and a wet method in which the silane coupling agent is dripped into a solvent in which the magnetic material has been dispersed (see coln. 26, lines 54-60). However, the reference does not disclose use of the aminosilane coupling agent with a fluorine-modified silicone resin for coating a core material (see page 64, line 21 – page 65, line 13) of a carrier in a two-component developer as required by claim 1. Accordingly, the present invention is distinguished from the reference.

Secondly, Yuasa does not disclose a toner having a particular wax to be used with a carrier coated with a fluorine-modified silicone resin containing the aminosilane coupling agent required in claim 1. The particular wax in the present invention shows

high optical transmissivity and high gloss used in an oil-less fixing toner (see page 84, line 9-page 85 line 2; and Table 16).

An advantage for two-component developer could be achieved by using a carrier, which comprises a core material coated with a curing type silicon resin and an aminosilane coupling agent, as required by claim 1. See page 83 line 12.

Therefore, Yuasa does not suggest the composition of the resins of the carrier or results achieved in the invention of claim 1.

Nakamura does not remedy the differences of Yuasa. In addition, Nakamura requires suitable charging obtained with a positive chargeable toner and discloses that when the amount of charge becomes lower, the images become foggy (see page 10, Example 1; Figs. 2A-2D). In contrast, the present invention can use negatively charged developer as well as positively charged developer (see page 12, lines 7-12; page 71, lines 8-19; and Table 7), which the reference does not disclose.

Therefore, the present invention is distinguished from Yuasa, and the references do not suggest the present invention. Therefore, the rejection of claims 1, 6, 11, 12, and 14-18 should be withdrawn.

Claims 2 and 3 have been rejected under 35 U.S.C. 103 (a) as being unpatentable over Yuasa et al. (US Patent No. 6575963) in view of Nakamura et al. (US PBPub No. 2002/0064724), as applied to claim 1 above, and further in view of Mizoe et al. (US PGPub 2003/0152856). Applicants respectfully traverse this rejection.

Applicants understand that Yuasa reference actually is US Patent No. 6579653, cited in the rejection of claims 1, 6, 11, 12, and 14-18. These claims are allowable over Yuasa and Nakamura for the same reason as discussed in claim 1 above. Mizoe does not remedy such deficiencies of Yuasa in view of Nakamura. Applicants are not conceding the correctness of the rejection.

Claims 4, 5, 7 and 13 have been rejected under 35 U.S.C. 103 (a) as being unpatentable over Yuasa et al. (US Patent No. 6575963) in view of Nakamura et al. (US PBPub No. 2002/0064724), as applied to claim 1 above, and further in view of Yuasa et al. (US PGPub 2002/0086229). Applicants respectfully traverse this rejection.

Applicants understand again that Yuasa is US Patent No. 6579653. These claims are allowable over Yuasa '653 and Nakamura for the same reason as discussed in claim 1 above. Mizoe and Yuasa '229 do not remedy such deficiencies of Yuasa in view of Nakamura. Applicants are not conceding the correctness of the rejection.

Claims 8-10 have been rejected under 35 U.S.C. 103 (a) as being unpatentable over Yuasa et al. (US Patent No. 6575963) in view of Nakamura et al. (US PBPub No. 2002/0064724), as applied to claim 1 above, and further in view of Shimizu et al. (US Patent No. 6117607). Applicants respectfully traverse this rejection.

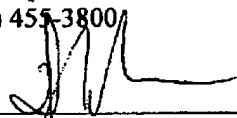
Applicants understand again that Yuasa is US Patent No. 6579653. These claims are allowable over '653 of Yuasa and Nakamura for the same reason as discussed in claim 1 above. Shimizu does not remedy such deficiencies of Yuasa in view of Nakamura. Applicants are not conceding the correctness of the rejection.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.

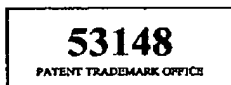
Respectfully submitted,

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**ELECTROPHOTOGRAPHIC DEVELOPMENT METHOD****Publication number:** JP1147478**Publication date:** 1989-08-09**Inventor:** YAMAGUCHI KIMITOSHI; MINAMITANI TOSHIKI;  
TAKAHASHI TOSHIHIKO**Applicant:** RICOH KK**Classification:****- international:** G03G9/087; G03G9/113; G03G13/08; G03G15/08;  
G03G9/087; G03G9/113; G03G13/06; G03G15/08;  
(IPC1-7): G03G9/08; G03G13/08; G03G15/08**- European:** G03G9/113D4B**Application number:** JP19870306287 19871203**Priority number(s):** JP19870306287 19871203

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**Abstract of JP1147478**

**PURPOSE:** To prevent the reduction of the extent of triboelectric charge of a toner at high humidity by using polyester resin as the principal component of the toner and coating a triboelectric charge causing member with silicone resin contg. an aminosilane coupling agent. **CONSTITUTION:** A toner contg. polyester resin as the principal component and a triboelectric charge causing member coated with silicone resin contg. an aminosilane coupling agent are used. The triboelectric charge causing member is the core material of a carrier which causes triboelectric charge to the toner or a transfer regulating member such as a sleeve or a doctor blade. The polyester resin content in the toner is regulated to  $\geq 40\text{wt.}\%$ . The extent of triboelectric charge of the toner is hardly reduced in an atmosphere at high humidity.

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## METHOD FOR DEVELOPING ELECTRON PHOTOGRAPHY AND ITS DEVELOPING AGENT

Publication number: JP1284862

Publication date: 1989-11-16

Inventor: YAMAGUCHI KIMITOSHI; MINAMITANI TOSHIKI;  
TAKAHASHI TOSHIHIKO

Applicant: RICOH KK

Classification:

- International: G03G9/083; G03G9/08; G03G9/10; G03G9/113;  
G03G9/083; G03G9/08; G03G9/10; G03G9/113; (IPC1-  
7): G03G9/08; G03G9/10

- European: G03G9/10; G03G9/113D4B

Application number: JP19880115702 19880512

Priority number(s): JP19880115702 19880512

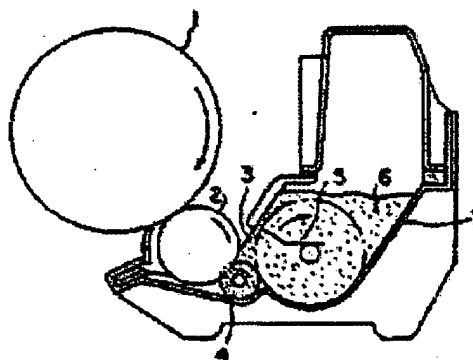
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### Abstract of JP1284862

**PURPOSE:** To prevent the decrease of the amount of the electrostatic charge of a toner in a high humidity condition by using a prescribed toner and a specified member capable of applying friction electrification for the title method. **CONSTITUTION:** A latent image is developed on a supporting body 1 using the toner contg. an inorg. hard fine particle (A) and the member (C) capable of applying the friction electrification covered with a silicone resin contg. an aminosilane coupling agent (B). And, the component (A) is composed of a hydrophobic silica, etc. The component (B) contd. in the resin which covers the member (C) such as the core material of a carrier, a sleeve 2 and a blade 3, etc., is composed of a compd. shown by formula I, etc. In the formula, R is alkoxy group or chlorine atom, Y is a hydrocarbon group contg. amino group, (m) and (n) are each 1-3. The concrete example of the compd. shown by the formula is exemplified by a compd. shown by formula II, etc.

Formula I

Formula II



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